STATE OF MISSOURI

DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION

MISSOURI STATE OPERATING PERMIT

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended,

Permit No.	MO-0121878
Owner:	Burger's Ozark Country Cured Ham's, Inc.
Address:	Route 3, Box 3248, California, MO 65018
Continuing Authority:	Same as above
Address:	Same as above
Facility Name:	Burger's Ozark Country Cured Ham's, Inc.
Address:	Highway 87 South, California, MO 65018
Legal Description:	NE ¼, NE ¼, Sec. 9, T44N, R15W, Moniteau County
Receiving Stream:	Tributary to North Moreau Creek (U)
First Classified Stream and ID:	Tributary to North Moreau Creek (C)(00950) 303(d) list
USGS Basin & Sub-watershed No.:	(10300102-200004)

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:

FACILITY DESCRIPTION

Outfall #001 – Industrial Wastewater - SIC #2013
No Discharge
Dissolved Air Floatation (DAF)/reverse osmosis pretreatment/sludge disposal is by contract hauler/two cell lagoon/wastewater irrigation/sludge is retained in lagoon.
Design population equivalent is 6,250.
Design flow is 28,956 gallons per day. (1-in-10 year design including net rainfall minus evaporation.)
Average design flow is 30,000* gallons per day (dry weather flows) (*312 days of production per year.)
Actual flow is 18,500 gallons per day.
Design sludge production is 228 dry tons/year.

This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law.

February 6, 2004
Effective Date

Stephen M. Mahfood, Director, Department of Natural Resources
Executive Secretary, Clean Water Commission

February 5, 2009
Expiration Date

G. Irene Crawford, Director, Northeast Regional Office

MO 780-0041 (10-93)

FACILITY DESCRIPTION (continued)

Outfall #001 – Irrigation System Design

Receiving Stream Watershed: a gaining stream setting that flows to a 303(d) listed stream.

Facility Type: No-discharge Storage and Irrigation System for year round flows into lagoon.

Design Basis:	**Avg Annual**	
Design dry weather flows	30,000 *	gpd
Design with 1-in-10 year flows	28,956	gpd
Design PE	6,250	

*312 days of production per year

Storm Water Flows: (Moniteau County)

Average Annual Rainfall. 38.0 inches
1-in-10 Year Annual Rainfall. 50.0 inches 25-year-24-hour storm: 5.2 inches

1-in-10 year Flows:	Annual
Runoff concrete and roof areas	0 ft.
Runoff earth areas (lagoon berm, lots, etc)	0 ft.
Rainfall minus Evaporation (R-E) on lagoon water surface	1.4 ft.

Lagoon Dimensions:

	Lagoon Cell 1	**Lagoon Cell 2**
Center Line Top Berm:	74,470 sq.ft. 15 feet depth	40,960 sq.ft. 8.7 feet depth
Storage volume (minimum to maximum water levels)	3, 634, 828 gallons	1, 026, 825 gallons
1-in-10 year Annual Storm water flows into lagoon (R-E):	104,258 cu. ft (779,954 gal)	57,344 cu. ft (428,990 gal.)

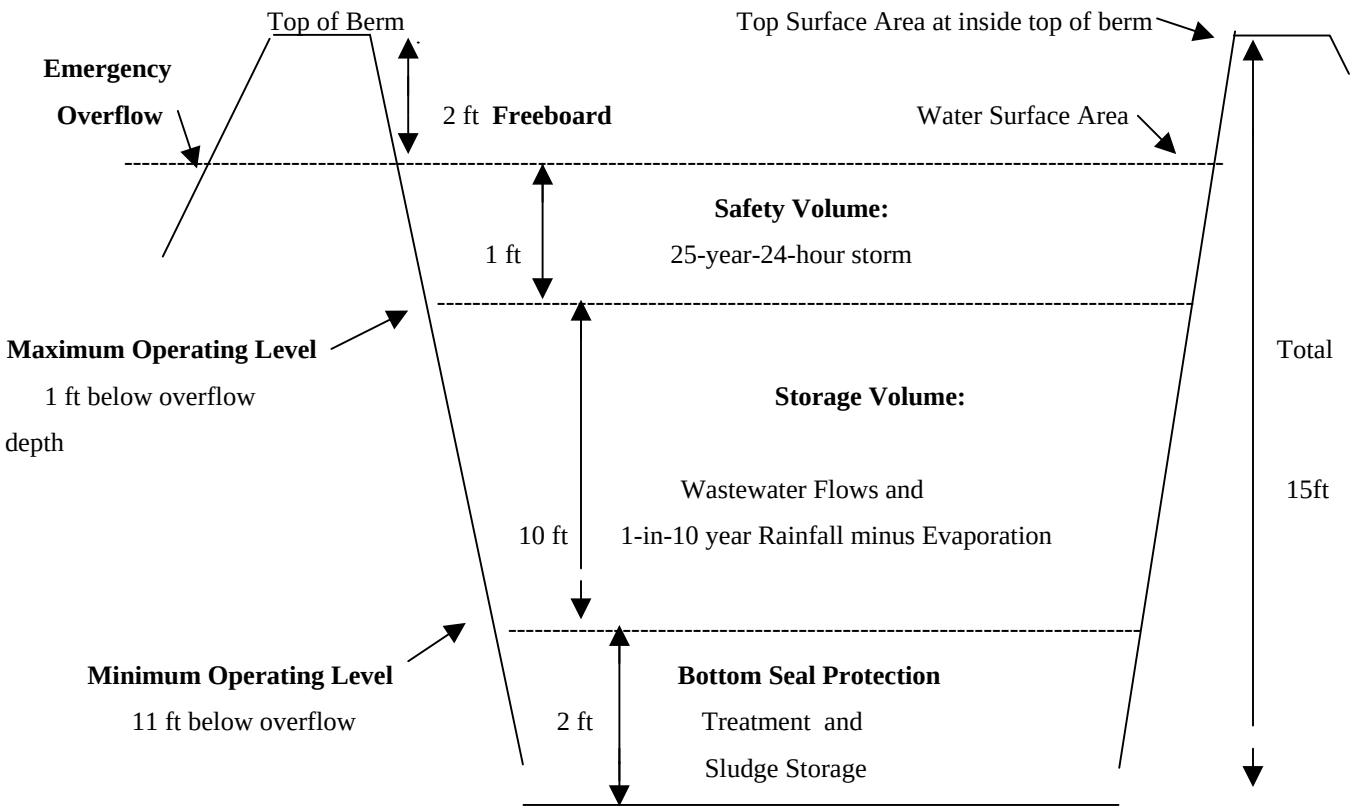
Storage Capacity:	**Days of Storage Avg Annual**
Design for Dry weather Flows:	182 days
Design with 1-in 10 year flows:	155 days

Land Application:

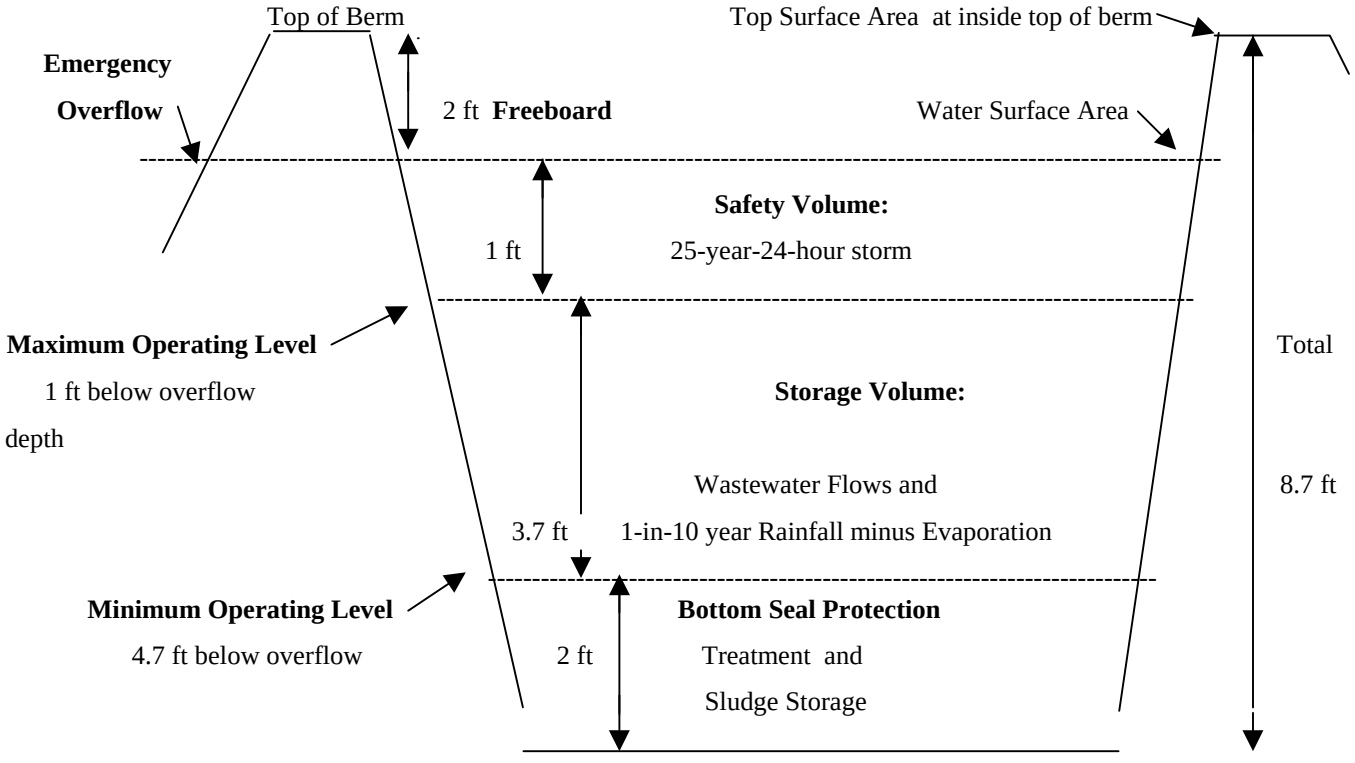
Irrigation Volume /year:	10,568,944 gallons (including 1-in-10 year flows)
Irrigation areas:	36 acres at design loading (85 acres total available)
Application rates/acre:	0.5 inch/hour; 1.5 inch/day; 4.5 inches/week; 11.0 inches/year
Field slopes:	less than 12 .0 percent
Equipment type:	traveling gun
Vegetation:	grass land
Application rate is based on:	hydraulic loading rate

Additional comments:

LAGOON Cell 1 PROFILE



LAGOON Cell 2 PROFILE



EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective upon issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #001 - Emergency discharge from lagoon (Note 1)						
Flow	MGD		*		once/day**	24 hr. estimate
Chemical Oxygen Demand$_5$	mg/L		65		once/week**	grab
Total Suspended Solids	mg/L		110		once/week**	grab
Ammonia nitrogen as N	mg/L		*		once/week**	grab
Nitrate/nitrite as N	mg/L		*		once/week**	grab
MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE April 28, 2004.						
Outfall #001 - Land Application Operational Monitoring (Notes 2 & 3)						
Lagoon Freeboard	Feet	*			once/month	measured
Irrigation Period	Hours	*			daily	total
Volume Irrigated	gallons	*			daily	total
Application Area	acres	*			daily	total
Application Rate	inches/ acre	*			daily	total
Rainfall	inches	*			daily	total
MONITORING REPORTS SHALL BE SUBMITTED ANNUALLY; THE FIRST REPORT IS DUE January 28, 2005.						
Outfall #001 - Irrigated Wastewater (Notes 4 & 5)						
Total Kjeldahl Nitrogen as N		*			once/year	grab
Ammonia Nitrogen as N		*			once/year	grab
Chlorides	mg/L	250			once/year	grab
Total Sodium	mg/L	250			once/year	grab
MONITORING REPORTS SHALL BE SUBMITTED ANNUALLY; THE FIRST REPORT IS DUE January 28, 2005.						
Outfall #001 - Soil Monitoring (Note 6)						
Available Phosphorus as P	mg/kg	*			once/3 years***	composite
Total Sodium	mg/kg	*			once/3 years***	composite
pH Units	SU	*			once/3 years***	composite
Cation Exchange Capacity	CEC	*			once/3 years***	composite
Organic Matter	%	*			once/3 years***	composite
MONITORING REPORTS SHALL BE SUBMITTED ANNUALLY; THE FIRST REPORT IS DUE January 28, 2005.						

B. STANDARD CONDITIONS

IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED Part I STANDARD CONDITIONS DATED October 1, 1980, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

* Monitoring requirement only.
** Monitor only when discharge occurs. Report as no-discharge when a discharge does not occur during the report period.
*** Report the 3 year test value annually.

Note 1 - **No-discharge facility requirements**. Wastewater shall be stored and land applied during suitable conditions so that there is no-discharge from the lagoon or irrigation site. An emergency discharge may occur when excess wastewater has accumulated above feasible irrigation rates due to precipitation exceeding the 1-in-10-year 365 day rainfall or the 25- year 24-hour storm event.

Note 2 - Records shall be maintained and summarized into an annual operating report that shall be submitted by January 28th of each year. See Special Conditions.

Note 3 - Lagoon freeboard shall be reported as lagoon water level in feet below the overflow level. See Special Conditions for Wastewater Irrigation System requirements.

Note 4 - Wastewater that is irrigated shall be sampled at the irrigation pump, intake point or wet well.

Note 5 - Monitor once per year between the months of May and October.

Note 6 – Composite samples from the top 0-6 inches of soil shall be collected from each land application site and each soil type in accordance with University of Missouri publication G9110, Sampling Your Soil for Testing. Testing shall conform to Soil Testing Procedures for North Central Region (North Dakota Agricultural Experiment Bulletin 499-Revised); Methods of Soil Analysis, American Society of Agronomy, Inc; Soil Testing and Plant Analysis, Soil Science Society of America Inc; EPA Methods; or other methods approved by the department.

C. SPECIAL CONDITIONS

1. Water Quality Standards
   a. Discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
   b. General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
      (1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
      (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
      (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
      (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
      (5) There shall be no significant human health hazard from incidental contact with the water;
      (6) There shall be no acute toxicity to livestock or wildlife watering;
      (7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
      (8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.

C. SPECIAL CONDITIONS (continued)

2. Report as no-discharge when a discharge does not occur during the report period.

3. Outfalls must be marked in field and on the topographic site map submitted with the permit application.

4. Reopener Clause.

a. This permit may be reopened and modified or alternatively revoked and reissued, to incorporate new or modified limitations or other conditions pertaining to phosphorus application rates to soils, the adequacy of wastewater lagoon liners, or other special conditions as may be necessary to protect waters of the state.
b. Nutrient Management Plan. The permit may be modified or reopened to require submittal of a Nutrient Management Plan NMP) in accordance with state, EPA and USDA guidelines and regulations or where determined appropriate by the department to meet water quality standards for nutrients. This determination may be based upon ambient water quality monitoring, Section A monitoring requirements and other applicable information.
c. This permit may be reopened and modified or alternatively revoked and reissued to incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analyses, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the states water quality standards.
d. The permit may be reopened and modified or alternatively revoked and reissued, to incorporate new or modified effluent limitations or other conditions, if the result of a wasteload allocation study, toxicity test, or other information indicates changes are necessary to ensure compliance with Missouri's Water Quality Standards.
e. This permit may be modified, or alternatively revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2) (C), and (D), 304(b)(2) and 307(a)(2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
   (1) Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
   (2) Controls any pollutant not limited in the permit.

   The permit as modified or reissued under this paragraph shall also contain any other requirements of the Act then applicable.

5. Changes in Discharges of Toxic Substances.

The permittee shall notify the Director as soon as it knows or has reason to believe:
(a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
   (1) One hundred micrograms per liter (100 µg/L);
   (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
   (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
   (4) The level established in Part A of the permit by the Director.
(b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.

6. Operation and Maintenance Manual.

The permittee shall develop, maintain and implement an Operation and Maintenance (O&M) Manual that includes all necessary items to ensure the operation and integrity of the waste handling and land application systems. Copies of the O&M Manual and subsequent revisions shall be submitted to the departments' Water Pollution Control Program and Regional Office for review and approval.

C. SPECIAL CONDITIONS (continued)

7. Annual Report.

An annual report is required in addition to the quarterly reporting under Section A of this permit. The annual report shall be submitted by January 28 of each year for the previous growing season from October 1 through September 30 or an alternate 12 month period approved by the Department and listed in the Operation and Maintenance Manual. This report shall be submitted using report forms approved by the Department and shall include a summary of the monitoring and record keeping required by the Special Conditions and Standard Conditions of this permit. The report shall include the following:

a. Record of maintenance and repairs performed during the year, average number of times per month the facility is checked to see if it is operating properly, and description of any unusual operating conditions encountered during the year;
b. The number of days the lagoon has discharged during the year, the discharge flow, the reasons discharge occurred and effluent analysis performed; and
c. A summary of the irrigation operations including freeboard at the start and end of the irrigation season, the number of days of irrigation for each month, the total gallons irrigated, the total acres used, crops grown, crop yields per acre, the application rate in inches/acre per day and for the year, the monthly and annual precipitation received at the facility and summary of testing results.
d. Narrative summary of any problems or deficiencies identified, permit violations, corrective action taken and improvements planned. Include such items as over application of sludge or nutrients, lower yields than predicted, spills, runoff during land application, citizen complaints, odors, nuisance conditions, improper field storage, improper spreading practices, failure to follow buffer zones, etc.

8. Wastewater Irrigation System.

a. Discharge Reporting. Any unauthorized discharge from the wastewater collection, pretreatment, lagoon, or irrigation system shall be reported to the department as soon as possible but always within 24 hours. Discharge is allowed only as described in the Facility Description and Effluent Limitations sections of this permit.

b. Irrigation Design. Permittee shall operate the land application system in accordance with the design parameters listed in the Facility Description section of this permit:

(1) No-Discharge System. When the Facility Description is No-Discharge, wastewater must be stored and irrigated at appropriate times. There shall be no-discharge from the irrigation site or storage lagoon except due to precipitation exceeding either the 1-in-10 year rainfall event for the design storage period or the 25-year-24-hour rainfall event.

c. Lagoon Operating Levels - No-discharge Systems. The minimum and maximum operating water levels for the storage lagoon shall be clearly marked. Each lagoon shall be operated so that the maximum water elevation does not exceed one foot below the overflow point except due to exceedances of the 1-in-10 year or 25-year-24 hour storm events. Wastewater shall be land applied whenever feasible based on soil and weather conditions and permit requirements. Storage lagoon(s) should be lowered to the minimum operating level prior to each winter by November 30.

d. Emergency Spillway. Lagoons and earthen storage basins shall have an emergency spillway to protect the structural integrity of earthen structures during operation at near full water levels and in the event of overflow conditions. The spillway shall be at least one foot below top of berm. The department may waive the requirement for overflow structures on small existing basins.

C. SPECIAL CONDITIONS (continued)

8. Wastewater Irrigation System (continued)

e. Land Application Site Locations. The permittee shall land apply only to suitable sites located within the overall property boundaries and descriptions listed in the permit application and approved Operation and Maintenance Manual. Permittee requests for additional sites including non-owned property must follow permit modification procedures prior to land application. To request additional sites, the permittee should submit a revised application Form A and I, mailing addresses for first down stream land owners of each site, topographic maps and other pertinent information for the proposed sites.

f. Subsurface Injection Requirement. Subsurface Injection or immediate incorporation after surface application should be considered where feasible and practicable to reduce exposure to wash off by storm water runoff and to retain nutrients in the soil for crop requirements. Surface application may be used when practical in accordance with procedures in the approved Operation and Maintenance Manual.

g. Land Application Equipment. The land application system shall be operated so as to provide uniform distribution of applied wastes over the entire application site. A complete ground cover of vegetation shall be maintained on the irrigation site unless the system is approved for row crop irrigation. Land application shall occur only during daylight hours. The land application system shall be capable of land applying the annual design flow during an application period of less than 100 days or 800 hours per year.

h. Saturated/Frozen Conditions. There shall be no land application during frozen, snow covered, or saturated soil conditions. There shall be no spray irrigation on days when more than 0.2 inch of precipitation is received or when there is observation by operator of an imminent or impending rainfall event. An on-site visual investigation of the field’s soil moisture condition will be made to determine whether land application can occur.

i. Buffer Zones. There shall be no irrigation within 300 feet of any down gradient, sinkhole, losing stream or water supply withdrawal; 300 feet of any lake or pond used for water supply; 100 feet of other ponds and lakes; 100 feet of gaining streams; 50 feet of intermittent or wet weather streams; 150 feet of dwelling; or 50 feet of the property line.

j. Public Access Restrictions. Public access shall not be allowed to the irrigation site(s). Fencing and public access restrictions to land application sites shall be in accordance with requirements in 10 CSR 20-8.020(15)(B)(5).

k. Equipment Checks during Irrigation. The irrigation system and application site shall be visually inspected at least once/2 hours during wastewater irrigation to check for equipment malfunctions and runoff from the irrigation site.